



# STIC Search Report

## Biotech-Chem Library

STIC Database Tracking Number 141030

To: Sarvamangala Devi  
Location: REM 3C18  
Art Unit: 1645  
Wednesday, December 22, 2004

Case Serial Number: 10/039383

From: Beverly Shears  
Location: Remsen Bldg.  
RM 1A54  
Phone: 571-272-2528

beverly.shears@uspto.gov

### Search Notes

Shears, Beverly

From: Devi, Sarvamangala  
Sent: Thursday, December 16, 2004 9:40 AM  
To: Shears, Beverly  
Subject: 10/039,383

Beverly:

Please perform a text search for the following claims in application 10/039,383:

Claim 10. A method for protecting a porcine animal against disease caused by *Mycoplasma hyopneumoniae* comprising the step of administering to said porcine animal a vaccine composition which comprises an immunizing amount of a *Mycoplasma hyopneumoniae* bacterin (killed or inactivated *Mycoplasma hyopneumoniae*), an adjuvant mixture comprising a polyacrylic acid

polymer and a mixture of metabolizable oil and a polyoxyethylene-polypropylene block copolymer (i.e., a mixture of squalane and Pluronic L121 mixture and 2% Carbopol), a pharmaceutically acceptable carrier which vaccine composition, after a single administration elicits protective immunity from *Mycoplasma hyopneumoniae* infection, and wherein the step of administering to said porcine animal is done by a method chosen from the group consisting of intramuscular injection, subcutaneous injection, oral administration and nasal administration.

claim 11. The method of claim 10, wherein the bacterin is *Mycoplasma hyopneumoniae* DNA cell equivalents. (MHDCE/mL).

Claim 14. (Original). The method of claim 10 wherein the adjuvant mixture consists of an acrylic acid polymer and a mixture of metabolizable oil that comprises one or more terpene hydrocarbons and a polyoxyethylene-polypropylene block copolymer present in a final concentration of about 1-25% v/v.

Claim 15. (Currently amended). The method of claim 14, wherein the polyacrylic acid polymer of the adjuvant mixture is CARBOPOL.

Claim 16. (Currently amended). The method of claim 14, wherein the metabolizable oil of the adjuvant mixture is a terpene hydrocarbon selected from the group consisting of squalene and squalane.

Thanx.

S. DEVI, Ph.D.

Date completed:

Searcher: Beverly e 2528

Terminal time: \_\_\_\_\_

Elapsed time: \_\_\_\_\_

CPU time: \_\_\_\_\_

Total time: \_\_\_\_\_

Number of Searches: \_\_\_\_\_

Number of Databases: \_\_\_\_\_

#### Search Site

\_\_\_\_\_ STIC

\_\_\_\_\_ CM-1

\_\_\_\_\_ Pre-S

#### Type of Search

\_\_\_\_\_ N.A. Sequence

\_\_\_\_\_ A.A. Sequence

\_\_\_\_\_ Structure

\_\_\_\_\_ Bibliographic

#### Vendors

\_\_\_\_\_ IG

\_\_\_\_\_ STN

\_\_\_\_\_ Dialog

\_\_\_\_\_ APS

\_\_\_\_\_ Geninfo

\_\_\_\_\_ SDC

\_\_\_\_\_ DARC/Questel

\_\_\_\_\_ Other

Devils.  
10/039383

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FILE 'REGISTRY' ENTERED AT 09:35:31 ON 22 DEC 2004

L1 E SQUALANE/CN 5  
1 S E3  
E PLURONIC L 121/CN 5  
L2 1 S E3  
E CARBOPOL/CN 5  
L3 1 S E3

FILE 'CAPLUS' ENTERED AT 09:36:42 ON 22 DEC 2004

L1 1 SEA FILE=REGISTRY ABB=ON PLU=ON SQUALANE/CN  
L2 1 SEA FILE=REGISTRY ABB=ON PLU=ON "PLURONIC L 121"/CN  
L3 1 SEA FILE=REGISTRY ABB=ON PLU=ON CARBOPOL/CN  
L4 211 SEA FILE=CAPLUS ABB=ON PLU=ON (PORCINE OR PIG OR HOG OR  
SWINE) AND ((MYCOPLASM? OR M) (W)HYOPNEUMON?)  
L5 5 SEA FILE=CAPLUS ABB=ON PLU=ON L4 AND (L1 OR L2 OR L3 OR  
SQUALANE OR PLURONIC(W) ("L121" OR "L 121") OR CARBOPOL)  
  
L4 211 SEA FILE=CAPLUS ABB=ON PLU=ON (PORCINE OR PIG OR HOG OR  
SWINE) AND ((MYCOPLASM? OR M) (W)HYOPNEUMON?)  
L6 2 SEA FILE=CAPLUS ABB=ON PLU=ON L4 AND (POLYOXYETHYLENE OR  
POLY(W) (OXYETHYLENE OR OXY ETHYLENE) OR POLYOXY ETHYLENE) (S) (PO  
LYPROPYLENE OR POLY PROPYLENE)  
  
L7 5 S L5 OR L6

L7 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN

ED Entered STN: 08 May 2003

ACCESSION NUMBER: 2003:349238 CAPLUS

DOCUMENT NUMBER: 138:358395

TITLE: Multivalent O/W or W/O/W oil adjuvant vaccines for  
animals using polymer emulsifiers and immunization  
with the vaccines

INVENTOR(S): Ogiya, Toshiaki; Katayama, Shigeji; Oda, Kenji

PATENT ASSIGNEE(S): Microbiochemical Research Foundation, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003128578	A2	20030508	JP 2001-322475	20011019
PRIORITY APPLN. INFO.:			JP 2001-322475	20011019
AB The vaccines contain biol. inactivated antigens and biol. active antigens and are manufactured by emulsification using polymer emulsifiers. Also claimed is a method to immunize animals by dissolving live vaccine prepared by freeze-drying live viruses or bacteria in O/W inactivated vaccines containing inactivated antigens in the aqueous phase prepared using polymer emulsifiers. Polymer emulsifiers do not affect activities of viruses and bacteria				

Searcher : Shears 571-272-2528

because they show no solubilizing action. Three suspensions of (a) formalin-inactivated cells of toxigenic *Escherichia coli* K88 and K99, (b) *Bordetella bronchiseptica* hemagglutinins, and (c) *Pasteurella multocida* toxin were emulsified with liquid paraffin containing mannitol oleate and **squalane** and the resulting W/O emulsion were added dropwise to aqueous solution of Sangelose 90L (hydrophobic hydroxypropyl Me cellulose) under homogenization to give 3 W/O/W oil adjuvant vaccines. These 3 vaccines were mixed with freeze-dried live vaccine containing attenuated **porcine** transmissible gastroenteritis virus and attenuated **porcine** epidemic diarrhea virus and injected to pregnant **pigs** twice. Antibodies of serum of immunized **pigs**, colostrum, and 7-day newborns were measured. These vaccines induced granulomatous tissue reaction only at the immunization site.

L7 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN

ED Entered STN: 24 Jan 2003

ACCESSION NUMBER: 2003:58612 CAPLUS

DOCUMENT NUMBER: 138:112399

TITLE: **Mycoplasma hyopneumoniae** bacterin vaccine

INVENTOR(S): Chu, Hsien-Jue; Li, Wumin; Xu, Zhichang

PATENT ASSIGNEE(S): Wyeth, John, and Brother Ltd., USA

SOURCE: U.S. Pat. Appl. Publ., 13 pp., Cont.-in-part of U.S. Pat. Appl. 2002 131,980.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003017171	A1	20030123	US 2002-150597	20020517
US 2002131980	A1	20020919	US 2002-39383	20020108
WO 2004058142	A2	20040715	WO 2003-US15115	20030514
WO 2004058142	A3	20041104		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:

US 2000-256637P	P	20001219
US 2002-39383	A2	20020108
US 2002-150597	A	20020517

AB The invention provides an improved **Mycoplasma hyopneumoniae** bacterin vaccine composition, which advantageously provides immunity from infection after a single administration. The composition comprises an inactivated **Mycoplasma hyopneumoniae** bacterin and an adjuvant mixture, which, in combination, provide immunity from **Mycoplasma hyopneumoniae** infection after a single administration, and elicit an immune response specific to

**Mycoplasma hyopneumoniae** bacterin and including cell-mediated immunity and local (secretory IgA) immunity. In a preferred embodiment, the adjuvant mixture comprises an acrylic acid polymer, most preferably **Carbopol**, and a mixture of a metabolizable oil such as one or more unsatd. terpene hydrocarbons, preferably squalene or **squalane**, and a **polyoxyethylene-polypropylene** block copolymer such as Pluronic. The vaccine composition may optionally include a preservative, preferably thimerosol and/or EDTA. In another embodiment, the invention provides an improved **Mycoplasma hyopneumoniae** bacterin vaccine composition, which advantageously provides immunity from infection after a single administration, and comprises an inactivated **Mycoplasma hyopneumoniae** bacterin and an adjuvant or adjuvant mixture, which, in combination, provide immunity from **Mycoplasma hyopneumoniae** infection after a single administration, and elicit an immune response specific to **Mycoplasma hyopneumoniae** bacterin and including cell-mediated immunity and local (secretory IgA) immunity, in combination with other vaccine components.

## IT 111-01-3, Squalane

RL: PAC (Pharmacological activity); PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
(adjuvant; **Mycoplasma hyopneumoniae** bacterin vaccine)

L7 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN

ED Entered STN: 28 Jun 2002

ACCESSION NUMBER: 2002:487412 CAPLUS

DOCUMENT NUMBER: 137:62143

TITLE: Improved **Mycoplasma hyopneumoniae** bacterin vaccine

INVENTOR(S): Chu, Hsien-Jue; Li, Wumin; Xu, Zhichang

PATENT ASSIGNEE(S): Wyeth, John, and Brother Ltd., USA

SOURCE: PCT Int. Appl., 28 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002049666	A2	20020627	WO 2001-US47865	20011211
WO 2002049666	A3	20030206		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
AU 2002028993	A5	20020701	AU 2002-28993	20011211
EP 1343525	A2	20030917	EP 2001-990123	20011211
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,			

10/039383

IE, SI, LT, LV, FI, RO, MK, CY, AL, TR  
 BR 2001016249 A 20040302 BR 2001-16249 20011211  
 JP 2004518655 T2 20040624 JP 2002-551004 20011211  
 BG 107898 A 20040831 BG 2003-107898 20030611  
 PRIORITY APPLN. INFO.: US 2000-256637P P 20001219  
 WO 2001-US47865 W 20011211

AB The invention provides an improved **Mycoplasma hyopneumoniae** bacterin vaccine which provides immunity from infection after a single administration. The vaccine comprises an inactivated **Mycoplasma hyopneumoniae** bacterin and an adjuvant mixture. In a preferred embodiment, the adjuvant mixture comprises

an acrylic acid polymer, most preferably **Carbopol**, one or more unsatd. terpene hydrocarbons, preferably **squalene** or **squalane**, and a **polyoxyethylene-polypropylene** block copolymer such as **Pluronic**.

IT **111-01-3, Squalane**  
 RL: AGR (Agricultural use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (in single-dose adjuvanted vaccine against **Mycoplasma hyopneumoniae** pneumonia of **swine**)

L7 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN

ED Entered STN: 23 May 2002

ACCESSION NUMBER: 2002:384881 CAPLUS

DOCUMENT NUMBER: 136:384969

TITLE: Vaccines and diagnostic reagents for **porcine** circoviruses and **porcine** multisystemic wasting syndrome

INVENTOR(S): Allan, Gordon; Meehan, Brian; Clark, Edward; Ellis, John; Haines, Deborah; Hassard, Lori; Harding, John; Charreyre, Catherine Elisabeth; Chappuis, Gilles Emile; McNeilly, Francis

PATENT ASSIGNEE(S): Merial, Fr.; The Queen's University of Belfast; University of Saskatchewan

SOURCE: U.S., 33 pp., Cont.-in-part of U.S. Ser. No. 82,558.  
 CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 6

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6391314	B1	20020521	US 1998-161092	19980925
FR 2769321	A1	19990409	FR 1997-12382	19971003
FR 2769321	B1	20011026		
FR 2769322	A1	19990409	FR 1998-873	19980122
FR 2769322	B1	20020308		
FR 2776294	A1	19990924	FR 1998-3707	19980320
FR 2776294	B1	20010622		
US 6368601	B1	20020409	US 1998-82558	19980521
EP 1281760	A1	20030205	EP 2002-17134	19981001
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
EP 1386617	A1	20040204	EP 2003-16998	19981001

Searcher : Shears 571-272-2528

10/039383

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, FI, CY

US 2002146432	A1	20021010	US 2001-884514	20010619
US 6660272	B2	20031209		
US 2004132178	A1	20040708	US 2003-653849	20030902
PRIORITY APPLN. INFO.:			FR 1997-12382	A 19971003
			FR 1998-873	A 19980122
			FR 1998-3707	A 19980320
			US 1998-82558	A2 19980521
			US 1997-69233P	P 19971211
			US 1997-69750P	P 19971216
			FR 1998-8777	A 19980706
			US 1998-161092	A3 19980925
			EP 1998-946547	A3 19981001
			EP 2002-17134	A3 19981001
			US 1998-209961	B1 19981210
			US 1999-347594	A3 19990701
			US 1999-151564P	P 19990831
			US 2000-583350	A2 20000531
			US 2000-680228	B2 20001006
			US 2001-784962	A2 20010216
			US 2001-884514	A2 20010619
			US 2001-935428	A1 20010820
			US 2002-334245	A2 20021231

AB The invention relates to novel type II **porcine** circovirus strains isolated from pulmonary or ganglionic samples obtained from farms affected by the post-weaning multisystemic wasting syndrome (PMWS). It relates to purified prepns. of these strains, conventional attenuated or inactivated vaccines, recombinant live vaccines, plasmid vaccines and subunit vaccines, as well as reagents (i.e. oligonucleotide probes/primers and antibodies) and diagnostic methods (e.g. hybridization, PCR, immunofluorescence, ELISA, etc.). It also relates to the DNA fragments which can be used for the production of subunits in an in vitro expression vector or as sequences to be integrated into a virus or plasmid type in vivo expression vector.

IT **111-01-3, Squalane**

RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(vaccines and diagnostic reagents for **porcine** circoviruses and post-weaning multisystemic wasting syndrome)

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN

ED Entered STN: 16 May 1992

ACCESSION NUMBER: 1992:201083 CAPLUS

DOCUMENT NUMBER: 116:201083

TITLE: Inactivated **Mycoplasma hyopneumoniae** bacterin and its use in vaccines

INVENTOR(S): Petersen, Gary R.; Dayalu, Krishnaswamy Iyengar

PATENT ASSIGNEE(S): Solvay Animal Health, Inc., USA

SOURCE: PCT Int. Appl., 57 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

Searcher : Shears 571-272-2528

10/039383

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9203157	A1	19920305	WO 1991-US5858	19910816
W: AU, BR, CA, FI, HU, JP, KR, NO, RO, SU				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE				
US 5565205	A	19961015	US 1990-568427	19900816
CA 2089552	AA	19920217	CA 1991-2089552	19910816
AU 9184923	A1	19920317	AU 1991-84923	19910816
AU 643829	B2	19931125		
EP 550477	A1	19930714	EP 1991-915945	19910816
EP 550477	B1	19970423		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
BR 9106748	A	19930824	BR 1991-6748	19910816
JP 06503708	T2	19940428	JP 1991-515102	19910816
JP 3040467	B2	20000515		
AT 151990	E	19970515	AT 1991-915945	19910816
ES 2103827	T3	19971001	ES 1991-915945	19910816
PRIORITY APPLN. INFO.:				
			US 1990-568427	A 19900816
			WO 1991-US5858	A 19910816

AB A virulent **Mycoplasma hyopneumoniae** isolate is inactivated with binary ethylenimine (produced in situ from 2-bromoethylamine-HBr) to provide a vaccine against respiratory infections with **M. hyopneumoniae** in swine. Thus, 400 mL of a virulent culture was treated with 40 mL 2% NaHCO<sub>3</sub> to raise the pH to 7.5, followed by swirling with 0.33 g 2-bromoethylamine-HBr at 37° for 24 h and neutralizing with 0.5 g Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>. The vaccine, containing also 0.2% Carbopol and 0.005% thimerosal (preservative) was administered intratracheally to 1-wk-old pigs. Local secretory antibodies and/or cell-mediated immunity appeared more important than circulating antibodies in conferring protection.

(FILE 'MEDLINE, BIOSIS, EMBASE, WPIDS, JICST-EPLUS, JAPIO, CABA, AGRICOLA, VETU, VETB, PHIC, PHIN, TOXCENTER, DISSABS, PASCAL, FEDRIP' ENTERED AT 09:40:04 ON 22 DEC 2004)

L8 2 S L7  
L9 2 DUP REM L8 (0 DUPLICATES REMOVED)

L9 ANSWER 1 OF 2 WPIDS COPYRIGHT 2004 THE THOMSON CORP on STN  
ACCESSION NUMBER: 2004-625291 [60] WPIDS  
CROSS REFERENCE: 2002-666847 [71]  
DOC. NO. CPI: C2004-224828  
TITLE: Vaccine composition for immunizing animal against infection by **Mycoplasma hyopneumoniae** and viral pathogens, comprises **Mycoplasma hyopneumoniae** bacterin, viral antigen e.g. swine influenza virus, adjuvant mixture, and carrier.  
DERWENT CLASS: A96 B04 C06 D16  
INVENTOR(S): CHU, H; LI, W; XU, Z  
PATENT ASSIGNEE(S): (AMHP) WYETH  
COUNTRY COUNT: 103  
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
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Searcher : Shears 571-272-2528

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 WO 2004058142 A2 20040715 (200460)\* EN 39  
 RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS  
 LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW  
 W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK  
 DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR  
 KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PH PL  
 PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU  
 ZA ZM ZW  
 AU 2003303129 A1 20040722 (200476)

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2004058142	A2	WO 2003-US15115	20030514
AU 2003303129	A1	AU 2003-303129	20030514

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2003303129	A1 Based on	WO 2004058142

PRIORITY APPLN. INFO: US 2002-150597 20020517

AN 2004-625291 [60] WPIDS

CR 2002-666847 [71]

AB WO2004058142 A UPAB: 20041125

NOVELTY - A vaccine composition eliciting protective immunity against **Mycoplasma hyopneumoniae** comprises M.

**hyopneumoniae** bacterin, viral antigen selected from swine influenza virus, **porcine** reproductive and respiratory syndrome virus and **porcine** circovirus, adjuvant mixture comprising acrylic acid polymer and mixture of metabolizable oil and polyoxyethylene-polyoxypropylene block copolymer, and carrier.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for protection of animal against diseases caused by M. **hyopneumoniae** and viral antigens, which involves administering the vaccine composition to the animal.

ACTIVITY - Antibacterial; Virucide. No biological data given.

MECHANISM OF ACTION - Vaccine. 33 (21-day **pigs**) were vaccinated with (2 ml, intramuscularly) vaccine containing **Mycoplasma hyopneumoniae** bacterin concentrate (60 v/v%). A control group **pigs** were not administered with the vaccine. 6 months following vaccination, 20 vaccinated **pigs** and 10 non-vaccinated control **pigs** were challenged with virulent **Mycoplasma hyopneumoniae** (1/ asterisk 106 microbes/ pig). The vaccinated **pigs** had an average lung lesion score of 3.6% and control **pigs** had lung lesion score of 14.6%. The lung lesions in the vaccinated group were significantly less than the control group. Hence, concluded that the vaccine induced long term protective immunity against virulent **Mycoplasma hyopneumoniae**.

USE - For immunizing and protecting animal (e.g. **pig**) against infection by **Mycoplasma hyopneumoniae** and viral pathogen (claimed).



10/039383

ADVANTAGE - The improved **Mycoplasma hyopneumoniae** bacterin vaccine induces protective immunity against infections/diseases caused by the organism with single administration. The vaccine elicits an immune response specific to **Mycoplasma hyopneumoniae** bacterin including cell-mediated immunity and local (secretory IgA) immunity.  
Dwg.0/0

L9 ANSWER 2 OF 2 WPIDS COPYRIGHT 2004 THE THOMSON CORP on STN  
ACCESSION NUMBER: 2002-666847 [71] WPIDS  
CROSS REFERENCE: 2004-625291 [60]  
DOC. NO. CPI: C2002-187160  
TITLE: Vaccine for immunizing an animal against infection by **Mycoplasma hyopneumoniae** comprises **Mycoplasma hyopneumoniae** bacterin, acrylic acid polymer, metabolizable oil, a **polyoxyethylene-polypropylene** block copolymer, and a carrier.  
DERWENT CLASS: A14 A25 A96 B04 C06 D16  
INVENTOR(S): CHU, H; LI, W; XU, Z; CHU, H S  
PATENT ASSIGNEE(S): (AMHP) WYETH; (AMHP) AMERICAN HOME PROD CORP  
COUNTRY COUNT: 101  
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2002049666	A2	20020627	(200271)*	EN	27
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW					
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW					
AU 2002028993	A	20020701	(200271)		
US 2002131980	A1	20020919	(200271)		
US 2003017171	A1	20030123	(200310)		
EP 1343525	A2	20030917	(200362)	EN	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR					
KR 2003065556	A	20030806	(200402)		
BR 2001016249	A	20040302	(200419)		
CZ 2003001721	A3	20040414	(200435)		
CN 1489472	A	20040414	(200442)		
JP 2004518655	W	20040624	(200442)		52
HU 2004000687	A2	20040628	(200452)		
MX 2003005357	A1	20031101	(200468)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002049666	A2	WO 2001-US47865	20011211
AU 2002028993	A	AU 2002-28993	20011211
US 2002131980	A1 Provisional	US 2000-256637P	20001219
		US 2002-39383	20020108
US 2003017171	A1 Provisional	US 2000-256637P	20001219

Searcher : Shears 571-272-2528

10/039383

	CIP of	US 2002-39383	20020108
EP 1343525	A2	US 2002-150597	20020517
KR 2003065556	A	EP 2001-990123	20011211
BR 2001016249	A	WO 2001-US47865	20011211
		KR 2003-708293	20030619
CZ 2003001721	A3	BR 2001-16249	20011211
		WO 2001-US47865	20011211
CN 1489472	A	WO 2001-US47865	20011211
JP 2004518655	W	CZ 2003-1721	20011211
		CN 2001-822634	20011211
HU 2004000687	A2	WO 2001-US47865	20011211
		JP 2002-551004	20011211
MX 2003005357	A1	WO 2001-US47865	20011211
		HU 2004-687	20011211
		WO 2001-US47865	20011211
		MX 2003-5357	20030613

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2002028993	A Based on	WO 2002049666
EP 1343525	A2 Based on	WO 2002049666
BR 2001016249	A Based on	WO 2002049666
CZ 2003001721	A3 Based on	WO 2002049666
JP 2004518655	W Based on	WO 2002049666
HU 2004000687	A2 Based on	WO 2002049666
MX 2003005357	A1 Based on	WO 2002049666

PRIORITY APPLN. INFO: US 2000-256637P 20001219; US  
2002-39383 20020108; US  
2002-150597 20020517

AN 2002-666847 [71] WPIDS

CR 2004-625291 [60]

AB WO 200249666 A UPAB: 20041026

NOVELTY - Vaccine composition (I) for immunizing an animal against infection by **Mycoplasma hyopneumoniae** comprises **Mycoplasma hyopneumoniae** bacterin, a mixture of acrylic acid polymer, metabolizable oil and a **polyoxyethylene-polypropylene** block copolymer, and a carrier. The vaccine provides immunity from **Mycoplasma hyopneumoniae** after a single administration.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(1) a method for protecting an animal against disease caused by **Mycoplasma hyopneumoniae** by administering (I); and

(2) a vaccine comprising inactivated **Mycoplasma hyopneumoniae**, a metabolizable oil, a **polyoxyethylene-polypropylene** block copolymer and an acrylic acid polymer in the form of an oil in water emulsion.

ACTIVITY - Antibacterial.

MECHANISM OF ACTION - Vaccine.

20 21-Day old **pigs** were vaccinated intramuscularly with 1 dose of a vaccine containing mycoplasma concentrate ( greater than 1 x 10<sup>10</sup> MHDCE/ml). 10 **Pigs** were not vaccinated (control) and 3 **pigs** were non-challenge environmental controls. All **pigs** were sero-negative at the time of vaccination indicating the animals were

Searcher : Shears 571-272-2528

10/039383

susceptible to **M. hyopneumoniae**. 6 Months following vaccination, the 20 vaccinated **pigs** and 10 control **pigs** were challenged with virulent **M. hyopneumoniae** (1000000 organisms/**pig**). Vaccinated **pigs** had an average lung lesion score of 3.6 % and the control **pigs** a lung lesion score of 14.6 %. The results showed that the vaccine induced long term protective immunity against virulent **M. hyopneumoniae** after a single dose vaccination.

USE - Vaccine is useful for immunizing animals against infection by **Mycoplasma hyopneumoniae** (claimed).  
Dwg.0/0

(FILE 'MEDLINE' ENTERED AT 09:41:33 ON 22 DEC 2004)

L10 120743 SEA FILE=MEDLINE ABB=ON PLU=ON SWINE/CT  
L11 19 SEA FILE=MEDLINE ABB=ON PLU=ON "MYCOPLASMA HYOPNEUMONIAE"/CT  
L12 17 SEA FILE=MEDLINE ABB=ON PLU=ON L10 AND L11

L12 ANSWER 1 OF 17 MEDLINE on STN  
ACCESSION NUMBER: 2004560938 MEDLINE  
DOCUMENT NUMBER: PubMed ID: 15532888  
TITLE: A system response to an outbreak of enzootic pneumonia in grow/finish pigs.  
AUTHOR: Barger Leeanne E  
CORPORATE SOURCE: Western College of Veterinary Medicine, University of Saskatchewan, 52 Campus Drive, Saskatoon, Saskatchewan S7N 5B4.  
SOURCE: Canadian veterinary journal. La revue veterinaire canadienne, (2004 Oct) 45 (10) 856-9.  
Journal code: 0004653. ISSN: 0008-5286.  
PUB. COUNTRY: Canada  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 200412  
ENTRY DATE: Entered STN: 20041110  
Last Updated on STN: 20041220  
Entered Medline: 20041202

ED Entered STN: 20041110  
Last Updated on STN: 20041220  
Entered Medline: 20041202  
AB A Mycoplasma hyopneumoniae-negative commercial swine production system broke with enzootic pneumonia at their grow/finish site in southern Manitoba in October, 2003. System responses included feed medication, depopulation, delayed shipment of pigs to the infected site, vaccination of at risk sow herds, and disinfection when grow/finish site depopulation was completed.

L12 ANSWER 2 OF 17 MEDLINE on STN  
ACCESSION NUMBER: 2004541382 MEDLINE  
DOCUMENT NUMBER: PubMed ID: 15514274  
TITLE: Decreased protein accretion in pigs with viral and bacterial pneumonia is associated with increased myostatin expression in muscle.  
AUTHOR: Escobar Jeffery; Van Alstine William G; Baker David H; Johnson Rodney W

Searcher : Shears 571-272-2528

10/039383

CORPORATE SOURCE: Department of Animal Sciences, University of Illinois,  
Urbana, IL 61801, USA.  
SOURCE: Journal of nutrition, (2004 Nov) 134 (11) 3047-53.  
Journal code: 0404243. ISSN: 0022-3166.  
PUB. COUNTRY: United States  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 200412  
ENTRY DATE: Entered STN: 20041030  
Last Updated on STN: 20041220  
Entered Medline: 20041209  
ED Entered STN: 20041030  
Last Updated on STN: 20041220  
Entered Medline: 20041209  
AB Chronic respiratory infections reduce growth in pigs but protein accretion  
(PA) during an ongoing multifactorial respiratory infection has not been  
determined, and the mechanisms underlying growth inhibition are largely  
unknown. The objectives of this study were to determine whether viral and  
bacterial pneumonia in young pigs decrease PA, increase serum IL-1beta and  
IL-6, and increase myostatin (MSTN) mRNA in biceps femoris and triceps  
muscles. Mycoplasma hyopneumoniae (Mh) or medium was given  
intratracheally at 4 wk of age, Porcine Reproductive and Respiratory  
Syndrome Virus (PRRSV) or medium was given intranasally at 6 wk of age,  
and pigs were killed 7 or 14 d after PRRSV inoculation for body  
composition analysis. PRRSV but not Mh induced a marked increase ( $P < 0.01$ ) in IL-1beta, IL-6, and MSTN mRNA and a decrease ( $P < 0.01$ ) in food  
intake, daily weight gain, PA, and lipid accretion. PRRSV also reduced ( $P < 0.01$ ) myofiber area in the biceps femoris. Food intake, weight gain,  
PA, and weight of biceps femoris and triceps muscles were negatively  
correlated ( $r = -0.4$  to  $-0.8$ ,  $P < 0.05$ ) with serum IL-1beta and IL-6 and  
with MSTN mRNA in muscle. These results suggest that the magnitude of  
increases in inflammatory cytokines during a respiratory infection may be  
predictive of decreases in PA and growth. They further suggest that  
during infection growth of skeletal muscle is limited in part by  
myostatin.  
L12 ANSWER 3 OF 17 MEDLINE on STN  
ACCESSION NUMBER: 2004518357 MEDLINE  
DOCUMENT NUMBER: PubMed ID: 15489423  
TITLE: The genome sequence of Mycoplasma hyopneumoniae strain 232,  
the agent of swine mycoplasmosis.  
AUTHOR: Minion F Chris; Lefkowitz Elliot J; Madsen Melissa L;  
Cleary Barbara J; Swartzell Steven M; Mahairas Gregory G.  
CORPORATE SOURCE: Department of Veterinary Microbiology and Preventive  
Medicine, Iowa State University, Ames, IA 50011, USA..  
fcminion@iastate.edu  
SOURCE: Journal of bacteriology, (2004 Nov) 186 (21) 7123-33.  
Journal code: 2985120R. ISSN: 0021-9193.  
PUB. COUNTRY: United States  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
OTHER SOURCE: GENBANK-AE017332  
ENTRY MONTH: 200411  
ENTRY DATE: Entered STN: 20041019

Searcher : Shears 571-272-2528

10/039383

Last Updated on STN: 20041219

Entered Medline: 20041124

ED Entered STN: 20041019

Last Updated on STN: 20041219

Entered Medline: 20041124

AB We present the complete genome sequence of *Mycoplasma hyopneumoniae*, an important member of the porcine respiratory disease complex. The genome is composed of 892,758 bp and has an average G+C content of 28.6 mol%. There are 692 predicted protein coding sequences, the average protein size is 388 amino acids, and the mean coding density is 91%. Functions have been assigned to 304 (44%) of the predicted protein coding sequences, while 261 (38%) of the proteins are conserved hypothetical proteins and 127 (18%) are unique hypothetical proteins. There is a single 16S-23S rRNA operon, and there are 30 tRNA coding sequences. The cilium adhesin gene has six paralogs in the genome, only one of which contains the cilium binding site. The companion gene, P102, also has six paralogs. Gene families constitute 26.3% of the total coding sequences, and the largest family is the 34-member ABC transporter family. Protein secretion occurs through a truncated pathway consisting of SecA, SecY, SecD, PrsA, DnaK, Tig, and LepA. Some highly conserved eubacterial proteins, such as GroEL and GroES, are notably absent. The DnaK-DnaJ-GrpR complex is intact, providing the only control over protein folding. There are several proteases that might serve as virulence factors, and there are 53 coding sequences with prokaryotic lipoprotein lipid attachment sites. Unlike other mycoplasmas, *M. hyopneumoniae* contains few genes with tandem repeat sequences that could be involved in phase switching or antigenic variation. Thus, it is not clear how *M. hyopneumoniae* evades the immune response and establishes a chronic infection.

L12 ANSWER 4 OF 17

MEDLINE on STN

ACCESSION NUMBER: 2004386519 MEDLINE

DOCUMENT NUMBER: PubMed ID: 15288927

TITLE: Development of two real-time PCR assays for the detection of *Mycoplasma hyopneumoniae* in clinical samples.

AUTHOR: Dubosson Christoph R; Conzelmann Claudia; Miserez Raymond; Boerlin Patrick; Frey Joachim; Zimmermann Werner; Hani Hansjurg; Kuhnert Peter

CORPORATE SOURCE: Institute of Veterinary Bacteriology, University of Bern, Laenggass-Str. 122, CH-3001, Switzerland.

SOURCE: Veterinary microbiology, (2004 Aug 19) 102 (1-2) 55-65. Journal code: 7705469. ISSN: 0378-1135.

PUB. COUNTRY: Netherlands

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE) (VALIDATION STUDIES)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 200410

ENTRY DATE: Entered STN: 20040804

Last Updated on STN: 20041022

Entered Medline: 20041021

ED Entered STN: 20040804

Last Updated on STN: 20041022

Entered Medline: 20041021

AB In order to improve the diagnosis of enzootic pneumonia (EP) in pigs two real-time polymerase chain reaction (rtPCR) assays for the detection of *Mycoplasma hyopneumoniae* in bronchial swabs from lung necropsies were

Searcher : Shears 571-272-2528

10/039383

established and validated in parallel. As a gold standard, the current "mosaic diagnosis" was taken, including epidemiological tracing, clinical signs, macro- and histopathological lesions of the lungs and immunofluorescence. One rtPCR is targeting a repeated DNA element of the *M. hyopneumoniae* genome (REP assay), the other a putative ABC transporter gene (ABC assay). Both assays were shown to be specific for *M. hyopneumoniae* and did not cross react with other bacteria and mollicutes from pig. With material from pigs of defined EP-negative farms the two assays showed to be 100% specific. When testing lungs from pig farms with EP, the REP assay detected 50% and the ABC assay 90% of the farms as positive. Both tests together detected all positive farms. Within a positive herd the two assays tested similarly with on average over 90% of the lung samples analysed from a single farm showing positive scores. A series of samples with suspicion of EP and samples from pigs with diseases other than respiratory taken from current routine diagnostic was assayed. None of the assays showed false positive results. The sensitivities in this sample group were 50% for the REP and 70% for the ABC assays and for both assays together 85%. The two assays run in parallel are therefore a valuable tool for the improvement of the current diagnosis of EP.

L12 ANSWER 5 OF 17 MEDLINE on STN  
ACCESSION NUMBER: 2004381934 MEDLINE  
DOCUMENT NUMBER: PubMed ID: 15285285  
TITLE: Association between *Mycoplasma hyopneumoniae* at different respiratory sites and presence of histopathological lung lesions.  
AUTHOR: Sibila M; Calsamiglia M; Segales J; Rosell C  
CORPORATE SOURCE: Centre de Recerca en Sanitat Animal, Departament de Sanitat i d'Anatomia Animals, Facultat de Veterinària, Universitat Autònoma de Barcelona, 08193 Bellaterra (Barcelona), Spain.  
SOURCE: Veterinary record, (2004 Jul 10) 155 (2) 57-8.  
Journal code: 0031164. ISSN: 0042-4900.  
PUB. COUNTRY: England: United Kingdom  
DOCUMENT TYPE: (EVALUATION STUDIES)  
Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 200408  
ENTRY DATE: Entered STN: 20040803  
Last Updated on STN: 20040827  
Entered Medline: 20040826  
ED Entered STN: 20040803  
Last Updated on STN: 20040827  
Entered Medline: 20040826

L12 ANSWER 6 OF 17 MEDLINE on STN  
ACCESSION NUMBER: 2004334255 MEDLINE  
DOCUMENT NUMBER: PubMed ID: 15236427  
TITLE: Robust Bayesian prediction of subject disease status and population prevalence using several similar diagnostic tests.  
AUTHOR: Evans Richard B; Erlandson Keith  
CORPORATE SOURCE: Production Animal Medicine, College of Veterinary Medicine, Iowa State University, Ames, Iowa, USA.. revans@iastate.edu  
SOURCE: Statistics in medicine, (2004 Jul 30) 23 (14) 2227-36.  
Journal code: 8215016. ISSN: 0277-6715.

Searcher : Shears 571-272-2528

10/039383

PUB. COUNTRY: England; United Kingdom  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 200410  
ENTRY DATE: Entered STN: 20040707  
Last Updated on STN: 20041022  
Entered Medline: 20041021

ED Entered STN: 20040707  
Last Updated on STN: 20041022  
Entered Medline: 20041021

AB Sometimes several diagnostic tests are performed on the same population of subjects with the aim of assessing disease status of individuals and the prevalence of the disease in the population, but no test is a reference test. Although the diagnostic tests may have the same biological underpinnings, test results may disagree for some specific animals. In that case, it may be difficult to determine disease status for individual subjects, and consequently population prevalence estimation becomes difficult. In this paper, we propose a robust method of estimating disease status and prevalence that uses heavy-tailed sampling distributions in a hierarchical model to protect against the influence of conflicting observations on inferences. If a subject has a test outcome that is discordant with the other test results then it is downweighted in diagnosing a subject's disease status, and for estimating disease prevalence. The amount of downweighting depends on the degree of conflict among the test results for the subject.  
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L12 ANSWER 7 OF 17 MEDLINE on STN  
ACCESSION NUMBER: 2004238523 MEDLINE  
DOCUMENT NUMBER: PubMed ID: 15135987  
TITLE: BF, HP, DQB and DRB are associated with haemolytic complement activity, acute phase protein reaction and antibody response in the pig.  
AUTHOR: Wimmers Klaus; Schellander Karl; Ponsuksili Siriluck  
CORPORATE SOURCE: Institute of Animal Breeding and Genetics, University of Bonn, Endenicher Allee 15, 53115 Bonn, Germany..  
wimmers@fbn-dummerstorf.de  
SOURCE: Veterinary immunology and immunopathology, (2004 Jun) 99 (3-4) 215-28.  
Journal code: 8002006. ISSN: 0165-2427.  
PUB. COUNTRY: Netherlands  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 200408  
ENTRY DATE: Entered STN: 20040512  
Last Updated on STN: 20040818  
Entered Medline: 20040817

ED Entered STN: 20040512  
Last Updated on STN: 20040818  
Entered Medline: 20040817

AB In order to examine the loci factor B (BF), C3, corticotropin releasing hormone (CRH), DQB, DRB, haptoglobin (HP) and transforming growth factor beta 1 (TGFB1) for association with traits of humoral, specific and unspecific defence F2-animals of a porcine resource family were genotyped

at single nucleotide polymorphisms within these loci. Haemolytic complement activity in the alternative and classical pathway, C3c and haptoglobin serum concentration and antibody titres were determined immediately prior and at days 4 and 10 after vaccinations against *Mycoplasma hyopneumoniae* (Mh), Aujeszky's disease virus, and porcine reproductive and respiratory syndrome virus at 6, 14 and 16 weeks of age, respectively. Analysis of variance revealed association of BF, HP and DRB with C3c serum concentration. The trend of haemolytic complement activity and C3c serum concentration during the experiment was affected by the interaction of DQB genotype and time of measurement. Association with antibody titres were found for BF, DQB and DRB. Results of the mixed model analyses were confirmed by quantitative transmission disequilibrium test that showed linkage and association with antibody titres, complement activity and acute phase reaction at certain times of measurement. The findings promote the importance of the candidate genes for humoral mechanisms of unspecific and specific defence that provide natural resistance against many pathogens.

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L12 ANSWER 8 OF 17 MEDLINE on STN  
 ACCESSION NUMBER: 2004203197 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 15099713  
 TITLE: Intra-unit correlations in seroconversion to *Actinobacillus pleuropneumoniae* and *Mycoplasma hyopneumoniae* at different levels in Danish multi-site pig production facilities.  
 AUTHOR: Vigre Hakan; Dohoo Ian R; Stryhn Henrik; Busch Marie Erika  
 CORPORATE SOURCE: Danish Institute for Food and Veterinary Research, Copenhagen V, Denmark.. hvi@dfvf.dk  
 SOURCE: Preventive veterinary medicine, (2004 Apr 30) 63 (1-2) 9-28.  
 Journal code: 8217463. ISSN: 0167-5877.  
 PUB. COUNTRY: Netherlands  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 200409  
 ENTRY DATE: Entered STN: 20040422  
 Last Updated on STN: 20040910  
 Entered Medline: 20040909  
 ED Entered STN: 20040422  
 Last Updated on STN: 20040910  
 Entered Medline: 20040909  
 AB In this paper, multilevel logistic models which take into account the multilevel structure of multi-site pig production were used to estimate the variances between pigs produced in Danish multi-site pig production facilities regarding seroconversion to *Actinobacillus pleuropneumoniae* serotype 2 (Ap2) and *Mycoplasma hyopneumoniae* (Mh). Based on the estimated variances, three newly described computational methods (model linearisation, simulation and linear modelling) and the standard method (latent-variable approach) were used to estimate the correlations (intra-class correlation components, ICCs) between pigs in the same production unit regarding seroconversion. Substantially different values of ICCs were obtained from the four methods. However, ICCs obtained by the simulation and the model linearisation were quite consistent. Data used for estimation were collected from 1161 pigs from 429 litters reared in 36 batches at six Danish multi-site farms chronically infected with the



agents. At the farms, weaning age was 3-4.5 weeks, after which batches of pigs were reared using all-in/all-out management by room. Blood samples were collected shortly before: weaning, transfer from weaning-site to finishing-site, and sending the first pigs in the batch for slaughter (third sampling). Few pigs seroconverted at the weaning-sites, whereas considerable variation in seroconversion was observed at the finishing-sites. Multilevel logistic models (initially including four levels: farm, batch, litter, pig) were used to decompose the variation in seroconversion at the finishing-site. However, there was essentially no clustering at the litter level-leading to the use of three-level models. In the case of Ap2, clustering within batch was so high that the data eventually were reduced to two levels (farm, batch). For seroconversion to Ap2, ICC between pigs within batches was approximately 90%, whereas the ICC between pigs within batches for Mh was approximately 40%. This indicates that the possibility for Mh to spread between pigs within batches is lower than for Ap2. The diversity in seroconversion between batches within the same farm was large for Ap2 (ICC approximately 10%), whereas there was a relative strongly ICC (approximately 50%) between batches for Mh. This indicates that the transmission of Mh is more consistent within a farm, whereas the presence of Ap2 varies between batches within a farm.

L12 ANSWER 9 OF 17 MEDLINE on STN  
 ACCESSION NUMBER: 2004160863 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 15053934  
 TITLE: Immunohistochemical labelling of cytokines in lung lesions of pigs naturally infected with Mycoplasma hyopneumoniae.  
 AUTHOR: Rodriguez F; Ramirez G A; Sarradell J; Andrada M; Lorenzo H  
 CORPORATE SOURCE: Department of Comparative Pathology, Veterinary Faculty, University of Las Palmas de Gran Canaria, Trasmontana s/n, 35416 Arucas, Gran Canaria, Spain.  
 SOURCE: Journal of comparative pathology, (2004 May) 130 (4) 306-12.  
 Journal code: 0102444. ISSN: 0021-9975.  
 PUB. COUNTRY: England: United Kingdom  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 200411  
 ENTRY DATE: Entered STN: 20040401  
 Last Updated on STN: 20041117  
 Entered Medline: 20041116  
 ED Entered STN: 20040401  
 Last Updated on STN: 20041117  
 Entered Medline: 20041116  
 AB Mycoplasma hyopneumoniae (Mh) is the primary agent of porcine enzootic pneumonia (PEN), a chronic respiratory disease endemic to pig farms, and characterized histologically by infiltration of mononuclear cells in airways and prominent hyperplasia of the bronchus-associated lymphoid tissue (BALT). To gain further insight into the pathogenesis of PEN, cytokine expression in the lung, with particular attention to the BALT, was examined immunohistochemically in pigs naturally infected with Mh. An increase ( $P < 0.05$ ) in proinflammatory and immunoregulatory cytokines (especially interleukin [IL]-2, IL-4 and tumour necrosis factor [TNF]-alpha, and to a lesser extent IL-1 [alpha and beta] and IL-6) was detected in the BALT, which showed intense lymphoid hyperplasia. IL-1beta

10/039383

and TNF-alpha were also detected in the bronchoalveolar exudate of infected pigs, and IL-6 and IL-8 were demonstrated in mononuclear cells of the alveolar septa. The results showed that in Mh infection, macrophage and lymphocyte activation results in the expression of a number of cytokines capable of inducing lung lesions and lymphoreticular hyperplasia of the BALT.

L12 ANSWER 10 OF 17 MEDLINE on STN  
ACCESSION NUMBER: 2004144819 MEDLINE  
DOCUMENT NUMBER: PubMed ID: 15036530  
TITLE: Experimental dual infection of pigs with an H1N1 swine influenza virus (A/Sw/Hok/2/81) and Mycoplasma hyopneumoniae.  
AUTHOR: Yazawa Shigeto; Okada Munenori; Ono Masaaki; Fujii Seiichi; Okuda Yo; Shibata Isao; Kida Hiroshi  
CORPORATE SOURCE: Zen-noh Institute of Animal Health, 7 Ohja-machi, Sakura, Chiba 285-0043, Japan.. yazawas@zk.zennoh.or.jp  
SOURCE: Veterinary microbiology, (2004 Mar 5) 98 (3-4) 221-8. Journal code: 7705469. ISSN: 0378-1135.  
PUB. COUNTRY: Netherlands  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 200405  
ENTRY DATE: Entered STN: 20040324  
Last Updated on STN: 20040521  
Entered Medline: 20040520

ED Entered STN: 20040324  
Last Updated on STN: 20040521  
Entered Medline: 20040520

AB Dual infection of pigs with swine influenza virus (SIV) and Mycoplasma hyopneumoniae was carried out to compare the clinical and pathological effects of dual infection in caesarian derived and colostrums deprived (CDCD) pigs, with that of a single infection with M. hyopneumoniae. In Experiment 1, 40-day-old CDCD pigs were inoculated only with SIV (A/Sw/Hok/2/81, H1N1). The virus was isolated from nasal swabs for 5-6 days. None of these pigs showed clinical signs of infection throughout the experimental period. These results suggested that this strain can infect pigs but is only slightly pathogenic when it is inoculated singly to a CDCD pig. In Experiment 2, 60-day-old CDCD pigs were inoculated with M. hyopneumoniae and then were inoculated with SIV (A/Sw/Hok/2/81) at 1 week (MHYO-7d-SIV-7d group) or 3 weeks (MHYO-21d-SIV-7d group) after M. hyopneumoniae inoculation. Macroscopically, dark red-to-purple lung lesions were observed in all of pigs at 14 or 28 days post-inoculation. Percentages of dark red-to-purple lung lesions in dual infection groups (MHYO-7d-SIV-7d group: 18.7 +/- 4.2%, MHYO-21d-SIV-7d group: 23.0 +/- 8.0%) were significantly ( $P < 0.05$ ) increased compared to those of each control group in which pigs were inoculated only with M. hyopneumoniae (MHYO-14d group: 4.7 +/- 2.9%, MHYO-28 group: 3.3 +/- 2.4%). Microscopically, bronchial epithelial lesions (epithelial disruption, degeneration, hyperplasia and formation of microabscess) were frequently observed in dark red-to-purple lung lesions of only the dual infection groups. These results demonstrate that the lung lesion of pigs inoculated with M. hyopneumoniae and SIV is more severe than that of pigs inoculated only with M. hyopneumoniae.

Searcher : Shears 571-272-2528

10/039383

L12 ANSWER 11 OF 17 MEDLINE on STN  
ACCESSION NUMBER: 2004089703 MEDLINE  
DOCUMENT NUMBER: PubMed ID: 14979438  
TITLE: Antibody response in sows and piglets following vaccination  
against Mycoplasma hyopneumoniae, toxigenic Pasteurella  
multocida, and Actinobacillus pleuropneumoniae.  
AUTHOR: Kristensen Charlotte S; Andreassen Margit; Ersboll Annette  
K; Nielsen Jens P  
CORPORATE SOURCE: Department of Clinical Studies, The Royal Veterinary and  
Agricultural University.. csk@danishmeat.dk  
SOURCE: Canadian journal of veterinary research = Revue canadienne  
de recherche veterinaire, (2004 Jan) 68 (1) 66-70.  
Journal code: 8607793. ISSN: 0830-9000.  
PUB. COUNTRY: Canada  
DOCUMENT TYPE: (CLINICAL TRIAL)  
Journal; Article; (JOURNAL ARTICLE)  
(RANDOMIZED CONTROLLED TRIAL)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 200405  
ENTRY DATE: Entered STN: 20040225  
Last Updated on STN: 20040510  
Entered Medline: 20040507

ED Entered STN: 20040225  
Last Updated on STN: 20040510  
Entered Medline: 20040507

AB The aim of the experimental study was to compare the humoral immune  
response and occurrence of adverse effects following single or multiple  
simultaneous vaccination of sows against Mycoplasma hyopneumonia,  
toxigenic Pasteurella multocida, and Actinobacillus pleuropneumoniae. In  
addition, passively transferred antibodies to piglets were studied until  
weaning at 3 weeks of age. Fever was seen in a few sows within the first  
12 hours after the 1st and 2nd vaccination. No difference in the  
occurrence of other adverse effects was observed between groups. Antibody  
levels were significantly higher in vaccinated sows and their offspring  
compared with the control group. This was found to be independent of  
single or simultaneous vaccinations with the 3 vaccines. In conclusion,  
applying multiple vaccines simultaneously to sows appeared not to  
influence the occurrence of adverse effects or the sow's serum levels of  
antibodies at the time of farrowing, nor the offspring's serum levels up  
to 3 weeks of age.

L12 ANSWER 12 OF 17 MEDLINE on STN  
ACCESSION NUMBER: 2004089695 MEDLINE  
DOCUMENT NUMBER: PubMed ID: 14979430  
TITLE: Dynamics of Mycoplasma hyopneumoniae infection in 12 farms  
with different production systems.  
AUTHOR: Sibila Marina; Calsamiglia Maria; Vidal Dolors; Badiella  
Llorenc; Aldaz Alvaro; Jensen Jens C  
CORPORATE SOURCE: Centre de Recerca en Sanitat Animal, Edifici V, Campus de  
Bellaterra, UAB 08193, Bellaterra, Barcelona, Spain.  
SOURCE: Canadian journal of veterinary research = Revue canadienne  
de recherche veterinaire, (2004 Jan) 68 (1) 12-8.  
Journal code: 8607793. ISSN: 0830-9000.  
PUB. COUNTRY: Canada  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

Searcher : Shears 571-272-2528

10/039383

(MULTICENTER STUDY)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 200405  
ENTRY DATE: Entered STN: 20040225  
Last Updated on STN: 20040510  
Entered Medline: 20040507

ED Entered STN: 20040225

Last Updated on STN: 20040510.

Entered Medline: 20040507

AB This study had 2 objectives: 1) to determine the involvement of *Mycoplasma hyopneumoniae* in respiratory outbreaks in herds of pigs, with the use of a nested polymerase chain reaction (nPCR) and an enzyme-linked immunosorbent assay (ELISA); and 2) to determine if the dynamics of *M. hyopneumoniae* infection differ between 3-site versus 1- or 2-site production systems (in which at least farrowing/gestation and nursery pigs are on the same site). Animals of different ages from 12 Spanish farms with respiratory problems were randomly sampled. Blood samples and nasal swabs were collected in a single farm visit, and ELISA and nPCR tests, respectively, were performed. All the farms demonstrated *M. hyopneumoniae*. According to the proportions of infected animals and the appearance of clinical signs in the different age groups, the farms were divided into 2 groups: farms in which *M. hyopneumoniae* probably played an important role in the observed respiratory outbreak and farms in which *M. hyopneumoniae* was not the main agent involved in the outbreak. Although seroconversion occurred in most herds in the finishing units, the number of seropositive pigs in the first group of farms was greater than the number in the second group. Statistically significant differences ( $P < 0.0001$ ) between farms with a 1- or 2-site production system versus those with a 3-site production system were detected in nPCR results but not in rates of seroconversion. The farm effect also had a great influence on both controlled parameters: the pathogen's DNA and antibody detection. Thus, although *M. hyopneumoniae* was present in all the studied farms, there were significant differences in the infection dynamics and clinical implications according to the type of production system, and *M. hyopneumoniae* colonization and seroconversion were greatly influenced by the effect of the individual farm.

L12 ANSWER 13 OF 17 MEDLINE on STN

ACCESSION NUMBER: 2004042614 MEDLINE

DOCUMENT NUMBER: PubMed ID: 14741128

TITLE: Porcine circovirus-2 and concurrent infections in the field.

AUTHOR: Ellis J; Clark E; Haines D; West K; Krakowka S; Kennedy S; Allan G M

CORPORATE SOURCE: Department of Veterinary Microbiology, Western College of Veterinary Medicine, University of Saskatchewan, 52 Campus Drive, Saskatoon, Sask, Canada S7N 5B4..  
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SOURCE: Veterinary microbiology, (2004 Feb 4) 98 (2) 159-63. Ref: 25

Journal code: 7705469. ISSN: 0378-1135.

PUB. COUNTRY: Netherlands

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

General Review; (REVIEW)

(REVIEW, TUTORIAL)

LANGUAGE: English

Searcher : Shears 571-272-2528

FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 200405  
 ENTRY DATE: Entered STN: 20040127  
 Last Updated on STN: 20040506  
 Entered Medline: 20040505

ED Entered STN: 20040127  
 Last Updated on STN: 20040506  
 Entered Medline: 20040505

AB Porcine circovirus-2 (PCV-2) is the necessary cause of post-weaning multisystemic wasting syndrome (PMWS) in swine; however, a variety of co-factors, including other infectious agents, are thought to be necessary in the full expression of disease. Porcine parvovirus (PPV) was found in the inoculum used in the first experiments to reproduce PMWS in gnotobiotic swine. Retrospective and prospective studies in the field and laboratory have demonstrated PCV-2 can act synergistically with PPV to enhance the severity of PMWS. PCV-2 has been shown to play a role in the porcine infectious disease complex (PRDC). Other co-infecting agents with PCV-2 in the lung include, porcine reproductive and respiratory syndrome virus (PRRSV), swine influenza virus (SIV) and Mycoplasma hyopneumoniae. Exposure of pregnant sows to PPV, PRRSV, or encephalomyocarditis virus may interact with PCV-2 infected foetuses. The severity of hepatic lesions in PCV-2 infected pigs may be enhanced by co-infection with agents such as swine hepatitis E virus and Aujeszky's disease virus. Additional studies are required to determine the mechanistic basis for the interaction of PCV-2 with other agents in the pathogenesis of the various clinical syndromes that have been associated with PCV-2 infection.

L12 ANSWER 14 OF 17 MEDLINE on STN  
 ACCESSION NUMBER: 2003576153 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 14654289  
 TITLE: Evaluation of virulence of Mycoplasma hyopneumoniae field isolates.  
 AUTHOR: Vicca J; Stakenborg T; Maes D; Butaye P; Peeters J; de Kruif A; Haesebrouck F  
 CORPORATE SOURCE: Department of Reproduction, Obstetrics and Herd Health, Faculty of Veterinary Medicine, Ghent University, Salisburylaan 133, 9820 Merelbeke, Belgium..  
 j.vicca@rug.ac.be  
 SOURCE: Veterinary microbiology, (2003 Dec 30) 97 (3-4) 177-90.  
 Journal code: 7705469. ISSN: 0378-1135.  
 PUB. COUNTRY: Netherlands  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 200403  
 ENTRY DATE: Entered STN: 20031216  
 Last Updated on STN: 20040323  
 Entered Medline: 20040322

ED Entered STN: 20031216  
 Last Updated on STN: 20040323  
 Entered Medline: 20040322

AB The course of enzootic pneumonia, caused by Mycoplasma hyopneumoniae, is strongly influenced by management and housing conditions. Other factors, including differences in virulence between M. hyopneumoniae strains, may also be involved. The aim of this study was to evaluate the virulence of six M. hyopneumoniae field isolates and link it to genetic differences as

determined by randomly amplified polymorphic DNA (RAPD) analysis. Ninety, conventional *M. hyopneumoniae*-free piglets were inoculated intratracheally with the field isolates, a virulent reference strain or sterile culture medium. Animals were examined daily for the presence of disease signs and a respiratory disease score (RDS) was assessed per pig. Twenty-eight days post infection, pigs were euthanized, blood sampled and a lung lesion score was given. Lung samples were processed for histopathology, immunofluorescence testing for *M. hyopneumoniae* and isolation of *M. hyopneumoniae*. RAPD analysis was performed on all *M. hyopneumoniae* strains. Significant differences between isolates were found for the RDS, lung lesion score, histopathology, immunofluorescence and serology. Based on the results of the different parameters, isolates were divided into three "virulence" groups: low, moderately and highly virulent strains. Typically, a 5000 bp RAPD fragment was associated with the highly and moderately virulent strains whereas it was absent in low virulent strains. It was concluded that high variation in virulence exists between *M. hyopneumoniae* strains isolated from different swine herds. Further studies are required to determine whether the 5000 bp fragment obtained in the RAPD analysis can be used as a virulence marker.

L12 ANSWER 15 OF 17 MEDLINE on STN  
 ACCESSION NUMBER: 2003519422 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 14597175  
 TITLE: The pyruvate dehydrogenase complex of *Mycoplasma hyopneumoniae* contains a novel lipoyl domain arrangement.  
 AUTHOR: Matic Jake N; Wilton Jody L; Towers Rebecca J; Scarman Anthony L; Minion F Chris; Walker Mark J; Djordjevic Steve P  
 CORPORATE SOURCE: Microbiology and Immunology Section, Elizabeth Macarthur Agricultural Institute, Private Mail Bag 8, Camden, NSW, Australia.  
 SOURCE: Gene, (2003 Nov 13) 319 99-106.  
 Journal code: 7706761. ISSN: 0378-1119.  
 PUB. COUNTRY: Netherlands  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 OTHER SOURCE: GENBANK-AF443780; GENBANK-AY061947; GENBANK-AY061948  
 ENTRY MONTH: 200401  
 ENTRY DATE: Entered STN: 20031105  
 Last Updated on STN: 20040121  
 Entered Medline: 20040120  
 ED Entered STN: 20031105  
 Last Updated on STN: 20040121  
 Entered Medline: 20040120  
 AB The genes encoding the pyruvate dehydrogenase (PDH) complex (pdhA, pdhB, pdhC and pdhD) from *Mycoplasma hyopneumoniae* have been cloned and sequenced. The genes are arranged into two operons, designated pdhAB and pdhCD, which are not found together in the chromosome. The pdhA, pdhB, pdhC and pdhD genes encode proteins of predicted molecular masses of 44.2 kDa (pyruvate dehydrogenase major subunit; Elalpha), 36.6 kDa (pyruvate dehydrogenase minor subunit; Elbeta), 33.1 kDa (dihydrolipoyl acetyltransferase; E2) and 66.3 kDa (dihydrolipoyl dehydrogenase; E3), respectively. Sequence analysis of the pdhCD operon revealed the presence of a lipoyl-binding domain in pdhD but not in pdhC. The lipoyl domain is believed to act as a "swinging arm" that spans the gaps between the

catalytic domains of each of the subunits. Portions of the N-terminal regions of pdhA and pdhD were expressed as 6xHis-tag fusion proteins in *Escherichia coli* and purified by nickel affinity chromatography. The purified proteins were used to raise antibodies in rabbits, and Western blot analysis was performed with the polyclonal rabbit antiserum. Both the pdhA and pdhD genes were expressed among various strains of *M. hyopneumoniae* as well as the porcine mycoplasmas, *Mycoplasma hyorhinis* and *Mycoplasma flocculare*. Southern hybridisation analysis using probes from pdhA and pdhD detected one copy of each gene in the chromosome of *M. hyopneumoniae*. Since previous studies have shown pyruvate dehydrogenase activity in *M. hyopneumoniae* [J. Gen. Microbiol. 134 (1988) 791], it appears likely that a functional lipoyl-binding domain in the N terminus of PdhC is not an absolute prerequisite for pyruvate dehydrogenase enzyme activity. We hypothesise that the lipoyl-binding domain of PdhD is performing the enzymatic function normally attributed to the PdhC lipoyl-binding domain in other organisms. Searches of pyruvate dehydrogenase gene sequences derived from other *Mycoplasma* species showed that a putative lipoyl domain was absent in the pdhC gene from *Mycoplasma pulmonis*. However, like other bacterial species, pdhC gene sequences from *Mycoplasma capricolum*, *Mycoplasma genitalium* and *Mycoplasma pneumoniae* contain a putative lipoyl domain.

L12 ANSWER 16 OF 17 MEDLINE on STN  
 ACCESSION NUMBER: 2003509582 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 14585198  
 TITLE: Porcine TLR2 and TLR6: identification and their involvement in *Mycoplasma hyopneumoniae* infection.  
 AUTHOR: Muneta Yoshihiro; Uenishi Hirohide; Kikuma Reiko; Yoshihara Kazuhiro; Shimoji Yoshihiro; Yamamoto Ryuji; Hamashima Noriyuki; Yokomizo Yuichi; Mori Yasuyuki  
 CORPORATE SOURCE: Department of Immunology, National Institute of Animal Health, Tsukuba, Ibaraki 305-0856, Japan..  
 ymuneta@affrc.go.jp  
 SOURCE: Journal of interferon & cytokine research : official journal of the International Society for Interferon and Cytokine Research, (2003 Oct) 23 (10) 583-90.  
 Journal code: 9507088. ISSN: 1079-9907.  
 PUB. COUNTRY: United States  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 200406  
 ENTRY DATE: Entered STN: 20031031  
 Last Updated on STN: 20040606  
 Entered Medline: 20040604  
 ED Entered STN: 20031031  
 Last Updated on STN: 20040606  
 Entered Medline: 20040604  
 AB We successfully cloned and sequenced porcine toll-like receptor (TLR2) and TLR6 cDNA from porcine alveolar macrophages stimulated with 10 microg/ml lipopolysaccharide (LPS). The open reading frames (ORFs) of the porcine TLR2 and TLR6 cDNA were shown to be 2358 and 2391 bp in length and to encode 785 and 796 amino acids, respectively. The predicted amino acid sequence of porcine TLR2 was 72.3% homologous to human TLR2 and 61.0% homologous to murine TLR2. That of porcine TLR6 was 74.4% homologous to human TLR6 and 66.1% homologous to murine TLR6. Porcine TLR2 and TLR6

genes were both mapped to porcine chromosome 8 (TLR2: SSC8q21.1 --> 21.5; TLR6: SSC8p11.1 --> p21.1) by fluorescence in situ hybridization (FISH) and radiation hybrid mapping. Western blot analysis confirmed that TLR2 and TLR6 proteins were both expressed in porcine alveolar macrophages. Further, antiporcine TLR2 and TLR6 antibodies synergistically blocked tumor necrosis factor-alpha (TNF-alpha) production by porcine alveolar macrophages stimulated with Mycoplasma hyopneumoniae. These results indicated that both TLR2 and TLR6 are important in the recognition of M. hyopneumoniae in porcine alveolar macrophages and will be useful in understanding innate immunity against M. hyopneumoniae.

L12 ANSWER 17 OF 17 MEDLINE on STN  
 ACCESSION NUMBER: 2003217192 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 12738649  
 TITLE: Monoclonal antibodies to Escherichia coli-expressed P46 and P65 membranous proteins for specific immunodetection of Mycoplasma hyopneumoniae in lungs of infected pigs.  
 AUTHOR: Cheikh Saad Bouh K; Shareck F; Dea S  
 CORPORATE SOURCE: INRS-Institut Armand-Frappier, Universite du Quebec, Laval, Quebec, Canada, H7V 1B.  
 SOURCE: Clinical and diagnostic laboratory immunology, (2003 May) 10 (3) 459-68.  
 Journal code: 9421292. ISSN: 1071-412X.  
 PUB. COUNTRY: United States  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 200403  
 ENTRY DATE: Entered STN: 20030513  
 Last Updated on STN: 20040317  
 Entered Medline: 20040316

ED Entered STN: 20030513  
 Last Updated on STN: 20040317  
 Entered Medline: 20040316

AB The P46 and P65 proteins of Mycoplasma hyopneumoniae are two membranous proteins carrying species-specific antigenic determinants. Based on the genomic sequence of the reference strain ATCC 25934, primers were designed for PCR amplification of the genes encoding entire P46 (1,260 bp) and P65 (1,803 bp) and N-terminally truncated P65(c) (1,200 bp). These primers were shown to be specific to M. hyopneumoniae since no DNA amplicons could be obtained with other mycoplasma species that commonly colonize the porcine respiratory tract. Both amplified genes were then cloned into the pGEX-4T-1 vector to be expressed in Escherichia coli cells as recombinant fusion proteins with glutathione S-transferase (GST). Prior to generation of expression constructs, TGA nonsense codons, exceptionally used for tryptophan residues by M. hyopneumoniae, had been converted to TGG codons by PCR-directed mutagenesis. Following induction by IPTG (isopropyl-beta-D-thiogalactopyranoside), both GST-P46 and GST-P65(c) recombinant fusion proteins were recovered by disrupting transformed cells by sonication, purified by affinity chromatography, and then cut with thrombin to release the P46 and P65(c) moieties. The enriched E. coli-expressed P46 and P65c proteins were used to immunize female BALB/c mice for the generation of anti-P46 and anti-P65(c) monoclonal antibodies (MAbs). The polypeptide specificities of MAbs obtained was confirmed by Western blotting with cell lysates prepared from the homologous strain. Cross-reactivity study of the anti-P46 and anti-P65(c) MAbs towards two



10/039383

other *M. hyopneumoniae* reference strains (ATCC 25095 and J strains) and Quebec field strains that had been isolated in culture, suggested that the MAbs obtained against both membranous proteins were directed against highly conserved species-specific epitopes. No reactivity to other mycoplasma species tested was demonstrated. Clinical signs and lesions suggestive of enzootic pneumonia were reproduced in specific-pathogen-free pigs that had been inoculated intratracheally with a virulent Quebec field strain (IAF-DM9827) of *M. hyopneumoniae*. Both anti-P46 and anti-P65(c) MAbs permitted effective detection by indirect immunofluorescence and indirect immunoperoxidase assay of *M. hyopneumoniae* in, respectively, frozen and formalin-fixed, paraffin-embedded lung sections from pigs that were killed after the 6- to 7-week observation period.

FILE 'HOME' ENTERED AT 09:42:39 ON 22 DEC 2004

10/039383

22dec04 09:47:05 User219783 Session D2077.2

SYSTEM:OS - DIALOG OneSearch

File 65:Inside Conferences 1993-2004/Dec W3

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File 440:Current Contents Search(R) 1990-2004/Dec 22

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File 348:EUROPEAN PATENTS 1978-2004/Dec W02

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File 357:Derwent Biotech Res. 1982-2004/Dec W4

(c) 2004 Thomson Derwent & ISI

File 113:European R&D Database 1997

(c)1997 Reed-Elsevier(UK)Ltd All rts reserv

\*File 113: This file is closed (no updates)

Set Items Description

Set	Items	Description
S1	647	(PORCINE OR PIG OR HOG OR SWINE) AND ((MYCOPLASM? OR M) (W)-HYOPNEUMON?)
S2	8	S1 AND (SQUALANE OR PLURONIC(W) ("L121" OR "L 121") OR CARB-OPOL)
S3	6	S1 AND (POLYOXYETHYLENE OR POLY(W) (OXYETHYLENE OR OXY(W)ET-HYLENE) OR POLYOXY(W)ETHYLENE)
S4	13	S2 OR S3
S5	13	RD (unique items)

>>>No matching display code(s) found in file(s): 65, 113

5/3,AB/1 (Item 1 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

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01691650

Method for the in vitro diagnosis of type II **porcine** circovirus infection and diagnostic reagents

Verfahren zur in vitro-Diagnose von Infektionen durch Schweinecircovirus vom Typ II und diagnostische Reagenzien

Methode de diagnostic in vitro de l'infection par le circovirus porcin de type II et reactifs de diagnostic

PATENT ASSIGNEE:

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PATENT (CC, No, Kind, Date): EP 1386617 A1 040204 (Basic)

APPLICATION (CC, No, Date): EP 2003016998 981001;

PRIORITY (CC, No, Date): FR 9712382 971003; FR 98873 980122; FR 983707 980320

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE

RELATED PARENT NUMBER(S) - PN (AN):

EP 1281760 (EP 2002017134)

EP 1019510 (EP 2098946547)

INTERNATIONAL PATENT CLASS: A61K-039/12; A61K-039/42; C07K-016/08;

C07K-014/01; G01N-033/53; C12Q-001/68

ABSTRACT EP 1386617 A1 (Translated)

New type II **porcine** circovirus

A purified preparation of type II **porcine** circovirus (PCV).

Independent claims are also included for the following: (a) preparation of PCV (i) isolated from a physiological or tissue sample, particularly from a lesion, from a **pig** with symptoms of PMWS (**porcine** multisystemic wasting syndrome); or (ii) produced by, and isolated from, in vitro cell cultures infected with the virus of (i); (b) extract or culture supernatant, or antigen preparation, optionally purified, collected from in vitro cultures of cells infected with PCV; (c) vaccine containing the products of (b); (d) DNA fragments (A) of 1767 bp (1), 1767 bp (2), 1767 bp (3), 1768 bp (4) or 1768 bp (6), or containing an open reading frame (ORF) of PCV; (e) polypeptides (I) encoded by (A) or these ORF; (f) in vitro expression vector containing (A), or these ORFs; (g) polypeptides (Ia), optionally purified, expressed from the vector of (f); (h) subunit vaccine containing at least one (I) or (Ia), diluent or vehicle and optionally an adjuvant; (i) in vivo expression vector, integrated into a genome, containing (A) or the ORFs; (j) live or plasmid vaccine containing the vector of (j), and a diluent or vehicle; (k) probe or primer containing all or part of (A) or the ORFs; (l) mono- or poly-clonal antibodies raised against PCV, (I), (Ia) or their fragments; and (m) detection of PCV by identifying in a body fluid or tissue sample an antigen or antibody specific for the antigen.

TRANSLATED ABSTRACT WORD COUNT: 247

ABSTRACT EP 1386617 A1

L'invention concerne des souches de circovirus porcins isolees a partir de prelevements pulmonaires ou ganglionnaires provenant d'elevage atteints par le syndrome de deperissement generalise de post-sevrage (en anglais PMWS). Elle concerne des preparations purifiees de ces souches, des vaccins classiques attenues ou inactives, des vaccins vivants recombinants, des vaccins plasmidiques et des vaccins de sous-unites, ainsi que des reactifs et methodes de diagnostic. Elle concerne aussi des fragments d'ADN pouvant etre utilises pour la production de sous-unites dans un vecteur d'expression in vitro ou comme sequences a integrer dans un vecteur d'expression in vivo de type virus ou plasmide.

ABSTRACT WORD COUNT: 100

10/039383

LANGUAGE (Publication,Procedural,Application): French; French; French  
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(French)	200406	792
SPEC A	(French)	200406	7575
Total word count - document A			8367
Total word count - document B			0
Total word count - documents A + B			8367

5/3,AB/2 (Item 2 from file: 348)

DIALOG(R) File 348:EUROPEAN PATENTS

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01538255

**Porcine** circoviruses, vaccines and diagnostic reagents  
Schweinecircoviren, Impfstoffe und diagnostische Reagenzien  
Circovirus porcins, vaccins et reactifs de diagnostic

PATENT ASSIGNEE:

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INVENTOR:

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LEGAL REPRESENTATIVE:

Nargolwalla, Cyra et al (92341), Cabinet Plasseraud 65/67 rue de la Victoire, 75440 Paris Cedex 09, (FR)

PATENT (CC, No, Kind, Date): EP 1281760 A1 030205 (Basic)

APPLICATION (CC, No, Date): EP 2002017134 981001;

PRIORITY (CC, No, Date): FR 9712382 971003; FR 98873 980122; FR 983707 980320

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE

RELATED PARENT NUMBER(S) - PN (AN):

EP 1019510 (EP 98946547)

RELATED DIVISIONAL NUMBER(S) - PN (AN):

(EP 2003016998)

INTERNATIONAL PATENT CLASS: C12N-015/34; C07K-014/01; A61K-039/12;

A61K-048/00; C12Q-001/68; C07K-016/08; G01N-033/53

ABSTRACT EP 1281760 A1 (Translated)

Searcher : Shears 571-272-2528

New type II **porcine** circovirus

A purified preparation of type II **porcine** circovirus (PCV).

Independent claims are also included for the following:

- (a) preparation of PCV
  - (i) isolated from a physiological or tissue sample, particularly from a lesion, from a **pig** with symptoms of PMWS (**porcine** multisystemic wasting syndrome); or
  - (ii) produced by, and isolated from, in vitro cell cultures infected with the virus of (i);
- (b) extract or culture supernatant, or antigen preparation, optionally purified, collected from in vitro cultures of cells infected with PCV;
- (c) vaccine containing the products of (b);
- (d) DNA fragments (A) of 1767 bp (1), 1767 bp (2), 1767 bp (3), 1768 bp (4) or 1768 bp (6), or containing an open reading frame (ORF) of PCV;
- (e) polypeptides (I) encoded by (A) or these ORFs;
- in vitro expression vector containing (A), or these ORFs;
- (f) polypeptides (Ia), optionally purified, expressed from the vector of (f);
- (g) subunit vaccine containing at least one (I) or (Ia), diluent or vehicle and optionally an adjuvant;
- in vivo expression vector, integrated into a genome, containing (A) or the ORFs;
- (h) live or plasmid vaccine containing the vector of (j), and a diluent or vehicle;
- (i) probe or primer containing all or part of (A) or the ORFs;
- (j) mono- or poly-clonal antibodies raised against PCV, (I), (Ia) or their fragments; and
- (k) detection of PCV by identifying in a body fluid or tissue sample an antigen or antibody specific for the antigen.

TRANSLATED ABSTRACT WORD COUNT: 245

## ABSTRACT EP 1281760 A1

L'invention concerne des souches de circovirus porcins isolees a partir de prelevements pulmonaires ou ganglionnaires provenant d'elevage atteints par le syndrome de deperissement generalise de post-sevrage (en anglais PMWS). Elle concerne des preparations purifiees de ces souches, des vaccins classiques attenues ou inactives, des vaccins vivants recombinants, des vaccins plasmidiques et des vaccins de sous-unites, ainsi que des reactifs et methodes de diagnostic. Elle concerne aussi des fragments d'ADN pouvant etre utilises pour la production de sous-unites dans un vecteur d'expression in vitro ou comme sequences a integrer dans un vecteur d'expression in vivo de type virus ou plasmide.

ABSTRACT WORD COUNT: 100

LANGUAGE (Publication,Procedural,Application): French; French; French

## FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(French)	200306	176
SPEC A	(French)	200306	7570
Total word count - document A			7746
Total word count - document B			0
Total word count - documents A + B			7746

5/3,AB/3 (Item 3 from file: 348)

DIALOG(R) File 348:EUROPEAN PATENTS

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01504564

DRUGS CONTAINING REDUCED VITAMIN B2  
REDUZIERTES VITAMIN B2 ENTHALTENDE ARZNEIMITTEL  
MEDICAMENTS A BASE DE VITAMINE B2 REDUITE  
PATENT ASSIGNEE:

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SUGIHARA, Yoshiki, 4-6, Inarimae, Tsukuba-shi, Ibaraki 305-0061, (JP)  
TOYOSAWA, Toshio, 527-63, Kamihirooka, Tsukuba-shi, Ibaraki 305-0041,  
(JP)

LEGAL REPRESENTATIVE:

HOFFMANN - EITLE (101511), Patent- und Rechtsanwälte Arabellastrasse 4,  
81925 Munchen, (DE)

PATENT (CC, No, Kind, Date): EP 1371370 A1 031217 (Basic)  
WO 2002074313 020926

APPLICATION (CC, No, Date): EP 2002705355 020319; WO 2002JP2616 020319

PRIORITY (CC, No, Date): JP 200180578 010321

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;  
LU; MC; NL; PT; SE; TR

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: A61K-031/525; A61K-031/675; A61K-031/7084;  
A61P-031/04; A61P-009/02; A61P-033/00

ABSTRACT EP 1371370 A1

The present invention provides an agent for preventing or treating infectious diseases, sepsis and/or septic shock, which has an excellent immunostimulating effect. More specifically, it provides an agent for immunostimulation and infection-protection and -treatment, and an agent for preventing or treating sepsis and septic shock, which comprise a reductant of riboflavin and/or a reductant of a riboflavin derivative or a pharmacologically acceptable salt of them as an active ingredient.

ABSTRACT WORD COUNT: 70

LANGUAGE (Publication,Procedural,Application): English; English; Japanese  
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200351	701
SPEC A	(English)	200351	5310
Total word count - document A			6011
Total word count - document B			0
Total word count - documents A + B			6011

5/3,AB/4 (Item 4 from file: 348)  
DIALOG(R)File 348:EUROPEAN PATENTS  
(c) 2004 European Patent Office. All rts. reserv.

01436831

Lawsonia intracellularis vaccine  
Lawsonia intracellularis Impfstoff  
Lawsonia intracellularis vaccin

10/039383

PATENT ASSIGNEE:

Akzo Nobel N.V., (200754), Velperweg 76, 6824 BM Arnhem, (NL),  
(Applicant designated States: all)

INVENTOR:

Jacobs, Antonius A. C., Ondersteweg 2, 5995 PS Kessel, (NL)  
Vermeij, Paul, Lepelstraat 3, 5845 BK St Anthonis, (NL)

LEGAL REPRESENTATIVE:

Keus, Jacobus Albertus Ronald (94292), INTERVET INTERNATIONAL B.V. P.O.  
Box 31, 5830 AA Boxmeer, (NL)

PATENT (CC, No, Kind, Date): EP 1219711 A2 020703 (Basic)  
EP 1219711 A3 021106

APPLICATION (CC, No, Date): EP 2001204919 011214;

PRIORITY (CC, No, Date): EP 2000204660 001220

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;  
LU; MC; NL; PT; SE; TR

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: C12N-015/31; C12N-001/21; C12Q-001/68;  
C07K-014/195; A61K-039/02; A61K-039/295; A61K-039/40; A61K-048/00;  
G01N-033/569; C07K-014/205

ABSTRACT EP 1219711 A2

The present invention relates i.a. to nucleic acid sequences encoding novel *Lawsonia intracellularis* proteins. It furthermore relates to DNA fragments, recombinant DNA molecules and live recombinant carriers comprising these sequences. Also it relates to host cells comprising such nucleic acid sequences, DNA fragments, recombinant DNA molecules and live recombinant carriers. Moreover, the invention relates to proteins encoded by these nucleotide sequences. The invention also relates to vaccines for combating *Lawsonia intracellularis* infections and methods for the preparation thereof. Finally the invention relates to diagnostic tests for the detection of *Lawsonia intracellularis* DNA, the detection of *Lawsonia intracellularis* antigens and of antibodies against *Lawsonia intracellularis*.

ABSTRACT WORD COUNT: 105

NOTE:

Figure number on first page: NONE

LANGUAGE (Publication,Procedural,Application): English; English; English  
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200227	976
SPEC A	(English)	200227	7366
Total word count - document A			8342
Total word count - document B			0
Total word count - documents A + B			8342

5/3,AB/5 (Item 5 from file: 348)

DIALOG(R) File 348:EUROPEAN PATENTS

(c) 2004 European Patent Office. All rts. reserv.

01331346

AZALIDE ANTIBIOTIC COMPOSITIONS

ANTIBIOTISCHE AZALID-ZUSAMMENSETZUNGEN

COMPOSITIONS ANTIBIOTIQUES A BASE D'AZALIDE

PATENT ASSIGNEE:

Searcher : Shears 571-272-2528

10/039383

Pfizer Products Inc., (2434221), Eastern Point Road, Groton, Connecticut  
06340, (US), (Proprietor designated states: all)

INVENTOR:

BOETTNER, Wayne Alan, Pfizer Global Research & Development, Eastern Point  
Road, Groton, CT 06340, (US)

LEGAL REPRESENTATIVE:

McMunn, Watson Palmer et al (72194), Pfizer Limited Patents Department  
Ramsgate Road, Sandwich, Kent CT13 9NJ, (GB)

PATENT (CC, No, Kind, Date): EP 1250343 A1 021023 (Basic)  
EP 1250343 B1 030625  
WO 2001055158 010802

APPLICATION (CC, No, Date): EP 2000979850 001130; WO 2000IB1824 001130

PRIORITY (CC, No, Date): US 178481 P 000127

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;  
LU; MC; NL; PT; SE; TR

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: C07H-017/00; A61K-031/70; A61P-031/04;  
A61P-033/02

NOTE:

No A-document published by EPO

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	200326	923
CLAIMS B	(German)	200326	809
CLAIMS B	(French)	200326	961
SPEC B	(English)	200326	10789
Total word count - document A			0
Total word count - document B			13482
Total word count - documents A + B			13482

5/3,AB/6 (Item 6 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

(c) 2004 European Patent Office. All rts. reserv.

01276120

Oil-based adjuvant vaccine

Oladjuvierter Impfstoff

Adjuvant pour vaccin a base d'huile

PATENT ASSIGNEE:

NOF CORPORATION, (1558205), 20-3, Ebisu 4-chome, Shibuya-ku, Tokyo  
150-6019, (JP), (Proprietor designated states: all)

Juridical Foundation, The Chemo-Sero-Therapeutic Research Institute,  
(283933), 6-1, Okubo 1-chome, Kumamoto-shi, Kumamoto 860-8568, (JP),  
(Proprietor designated states: all)

INVENTOR:

Saito, Koichi, 2-20-8-101, Minamitsukaguchi-cho, Amagasaki-shi, Hyogo  
661-0012, (JP)

Kishimoto, Yoko, 1-7-8, Nishikigaoka, Uozumi-cho, Akashi-shi, Hyogo  
674-0081, (JP)

Miyahara, Tokuji, 1866-1445, Kikudomi, Koushi-machi, Kikuchi-gun,  
Kumamoto 861-1112, (JP)

Takase, Kouzou, 3410-30, Sugimizu, Ohzu-machi, Kikuchi-gun, Kumamoto  
869-1236, (JP)

LEGAL REPRESENTATIVE:

Searcher : Shears 571-272-2528



10/039383

von Kreisler, Alek, Dipl.-Chem. et al (12437), Patentanwälte, von  
Kreisler-Selting-Werner, Bahnhofsvorplatz 1 (Deichmannhaus), 50667 Köln  
, (DE)

PATENT (CC, No, Kind, Date): EP 1097721 A2 010509 (Basic)  
EP 1097721 A3 010523  
EP 1097721 B1 030514

APPLICATION (CC, No, Date): EP 2000123909 001103;

PRIORITY (CC, No, Date): JP 99316121 991105

DESIGNATED STATES: BE; DE; DK; ES; FR; GB; IT; NL

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: A61K-009/113

#### ABSTRACT EP 1097721 A3

The present invention provides a W/O/W type oil adjuvant vaccine containing an outer aqueous phase containing 0.5 wt% - 20 wt% of a polyethylene glycol derivative having a molecular weight of 400 - 20,000, and an inner aqueous phase containing a biologically acceptable and effective amount of an antigen. The constitution of the present invention that a polyethylene glycol derivative having a specific molecular weight is contained in the outer aqueous phase enables preparation of a W/O/W type oil adjuvant vaccine showing a high adjuvant effect, reduced side effects such as topical response, superior preparation stability and superior workability to allow a person to give an injection easily due to the lowered viscosity.

ABSTRACT WORD COUNT: 114

LANGUAGE (Publication,Procedural,Application): English; English; English  
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200119	457
CLAIMS B	(English)	200320	470
CLAIMS B	(German)	200320	462
CLAIMS B	(French)	200320	532
SPEC A	(English)	200119	7301
SPEC B	(English)	200320	7326
Total word count - document A			7760
Total word count - document B			8790
Total word count - documents A + B			16550

5/3,AB/7 (Item 7 from file: 348)

DIALOG(R) File 348:EUROPEAN PATENTS

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01174520

Use of life attenuated bacteria for the manufacture of a submucosal vaccine  
Verwendung lebender abgeschwächter Bakterien zur Herstellung eines  
submukosalen Impfstoffes

Utilisation de bacteries vivantes atteneues pour la preparation d'un vaccin  
sous-mucosal

PATENT ASSIGNEE:

Akzo Nobel N.V., (200754), Velperweg 76, 6824 BM Arnhem, (NL),  
(Proprietor designated states: all)

INVENTOR:

Jacobs, Antonius Arnoldus Christiaan, Ondersteweg 2, 5995 PS Kessel,  
(NL)

Searcher : Shears 571-272-2528

10/039383

Goovaerts, Danny, Langenberg 18, 2460 Lichtaart, (BE)  
LEGAL REPRESENTATIVE:

Mestrom, Joannes Jozef Louis et al (74856), Intervet International B.V.,  
P.O. Box 31, 5830 AA Boxmeer, (NL)  
PATENT (CC, No, Kind, Date): EP 1023903 A1 000802 (Basic)

EP 1023903 B1 040114

APPLICATION (CC, No, Date): EP 2000200216 000120;

PRIORITY (CC, No, Date): EP 99200202 990126

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;  
LU; MC; NL; PT; SE

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: A61K-039/02; A61K-039/05; A61K-039/09;

A61K-039/102; A61K-039/104; A61K-039/10; A61P-031/04

ABSTRACT EP 1023903 A1

The present invention relates to the use of live attenuated bacteria for  
the manufacture of a vaccine for submucosal administration.

ABSTRACT WORD COUNT: 21

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200031	112
CLAIMS B	(English)	200403	149
CLAIMS B	(German)	200403	149
CLAIMS B	(French)	200403	152
SPEC A	(English)	200031	2667
SPEC B	(English)	200403	2580
Total word count - document A			2780
Total word count - document B			3030
Total word count - documents A + B			5810

5/3,AB/8 (Item 8 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

(c) 2004 European Patent Office. All rts. reserv.

01159829

PREVENTIVES/REMEDIES FOR INFECTION, ANTI-ENDOTOXIN AGENTS, VACCINE  
ADJUVANTS AND GROWTH PROMOTERS

PRAEVENTIVA/MITTEL FUR INFEKTION, ANTI-ENDOTOXIN MITTEL, IMPFSTOFF-ADJUVANZI  
EN SOWIE WACHSTUMSPROMOTOREN

PROPHYLACTIQUES/MEDICAMENTS POUR L'INFECTION, AGENTS ANTI-ENDOTOXINE,  
ADJUVANTS DE VACCIN ET PROMOTEURS DE CROISSANCE

PATENT ASSIGNEE:

Shin Mitsui Sugar Co., Ltd., (1427013), 8-2, Nihonbashi Honcho 2-chome,  
Chuo-ku, Tokyo 103-8423, (JP), (Applicant designated States: all)

INVENTOR:

MIZUTANI, Takeo, 1194-33, Hazawa-cho, Kanagawa-ku, Yokohama-shi, Kanagawa  
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KOGE, Kenji, 12-9-201, Dai 4-chome, Kamakura-shi, Kanagawa 247-0061, (JP)

NAGAI, Yukie, 5-44, Enzo 1-chome, Chigasaki-shi, Kanagawa 253-0084, (JP)

MURAKAMI, Hiroshi, 5-1-305, Kobukuroya 2-chome, Kamakura-shi, Kanagawa  
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KAWAI, Toshikazu, 5-1-304, Kobukuroya 2-chome, Kamakura-shi, Kanagawa  
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Searcher : Shears 571-272-2528

10/039383

KASHIMURA, Jun, 22-3, Shinkamata 2-chome, Ota-ku, Tokyo 144-0054, (JP)  
SHIMIZU, Takeo, Fujinodai-danchi 2-27-501, 3549-3, Honmachida,  
Machida-shi, Tokyo 194-0032, (JP)  
ARAKI, Seiichi, 1-35, Nagakunidai, Tsuchiura-shi, Ibabaki 300-0810, (JP)  
SUZUKI, Mamoru, 30-2-A101, Matsushiro 1-chome, Tsukuba-shi, Ibaraki  
305-0035, (JP)

LEGAL REPRESENTATIVE:

Prins, Adrianus Willem et al (20903), Vereenigde, Nieuwe Parklaan 97,  
2587 BN Den Haag, (NL)

PATENT (CC, No, Kind, Date): EP 1120118 A1 010801 (Basic)  
WO 20021546 000420

APPLICATION (CC, No, Date): EP 99970325 991008; WO 99JP5583 991008

PRIORITY (CC, No, Date): JP 98301745 981009; JP 9935047 990212

DESIGNATED STATES: DE; ES; FR; GB; IT; NL

INTERNATIONAL PATENT CLASS: A61K-035/78; A61K-039/39; A23L-001/214;  
A23L-001/30; A23K-001/16

ABSTRACT EP 1120118 A1

A preventive or remedy for infection, an anti-endotoxin agents, a  
vaccine adjuvants and a growth promoter each comprising a sugar  
cane-derived extract as an active ingredient which agent is safe to man  
and animals . Also presented are foods and feeds comprising these agents.

ABSTRACT WORD COUNT: 45

NOTE:

Figure number on first page: NONE

LANGUAGE (Publication,Procedural,Application): English; English; Japanese  
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200131	1674
SPEC A	(English)	200131	13040
Total word count - document A			14714
Total word count - document B			0
Total word count - documents A + B			14714

5/3,AB/9 (Item 9 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

(c) 2004 European Patent Office. All rts. reserv.

01043523

VACCINES DERIVED FROM **PORCINE** CIRCOVIRUSES

SCHWEINECIRCOVIREN ABGELEITETE IMPFSTOFFE

VACCINS A BASE DE CIRCOVIRUS PORCINS

PATENT ASSIGNEE:

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designated states: all)

The Queen's University of Belfast, (656553), Stoney Road, Stormont,  
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The University of Saskatchewan, (2506544), 52 Campus Drive, Saskatoon,  
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INVENTOR:

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CLARK, Edward, 22 Murphy Crescent, Saskatoon, Saskatchewan S7J 214, (CA)

Searcher : Shears 571-272-2528

10/039383

ELLIS, John, 812, 13th Street East, Saskatoon, Saskatchewan S7N 0M3, (CA)  
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HASSARD, Lori, 443 Perreault Lane, Saskatoon, Saskatchewan S7K 2A0, (CA)  
HARDING, John, 43 Jubilee Drive, Humboldt, Saskatchewan S0K 2A0, (CA)  
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Saint-Laurent de Mure, (FR)  
CHAPPUIS, Gilles, Emile, 3, rue Laurent Vibert, F-69006 Lyon, (FR)  
MCNEILLY, Francis, 4 Lisleen Place, Newtownards, BT3 4NH, (GB)

LEGAL REPRESENTATIVE:

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PATENT (CC, No, Kind, Date): EP 1019510 A1 000719 (Basic)  
EP 1019510 B1 030716  
WO 99018214 990415

APPLICATION (CC, No, Date): EP 98946547 981001; WO 98FR2107 981001

PRIORITY (CC, No, Date): FR 9712382 971003; FR 98873 980122; FR 983707  
980320

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;  
LU; MC; NL; PT; SE

RELATED DIVISIONAL NUMBER(S) - PN (AN):

EP 1281760 (EP 2002017134)

INTERNATIONAL PATENT CLASS: C12N-015/34; C07K-014/01; A61K-039/12;  
A61K-048/00; C12Q-001/68; C07K-016/08; G01N-033/53

NOTE:

No A-document published by EPO

LANGUAGE (Publication,Procedural,Application): French; French; French

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	200329	359
CLAIMS B	(German)	200329	333
CLAIMS B	(French)	200329	359
SPEC B	(French)	200329	6923
Total word count - document A			0
Total word count - document B			7974
Total word count - documents A + B			7974

5/3,AB/10 (Item 10 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

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00985690

Clostridium perfringens vaccine

Clostridium perfringens Impfstoff

Vaccine contre clostridium perfringens

PATENT ASSIGNEE:

Akzo Nobel N.V., (200754), Velperweg 76, 6824 BM Arnhem, (NL),

(applicant designated states:

AT;BE;CH;CY;DE;DK;ES;FI;FR;GB;GR;IE;IT;LI;LU;MC;NL;PT;SE)

INVENTOR:

Sergers, Ruud Philip Antoon Maria, Groenling 3, 5831 MZ Boxmeer, (NL)

Waterfield, Nicolas Robin, 20 Lucerne Close, Cherry Hinton, Cambridge CB1  
4YR, (GB)

Frandsen, Peer Lyng, 56 Borgmester Schneiders Vej, 2840 Holte, (DK)

Wells, Jeremy Mark, The Cottage Old House RD, Balsham, Cambridge CB1 GEF,

(GB)

## LEGAL REPRESENTATIVE:

Keus, Jacobus Albertus Ronald et al (94292), INTERVET INTERNATIONAL B.V.  
 P.O. Box 31, 5830 AA Boxmeer, (NL)  
 PATENT (CC, No, Kind, Date): EP 892054 A1 990120 (Basic)  
 APPLICATION (CC, No, Date): EP 98202032 980617;  
 PRIORITY (CC, No, Date): EP 97201888 970620  
 DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;  
 LU; MC; NL; PT; SE  
 INTERNATIONAL PATENT CLASS: C12N-015/31; A61K-039/08; C07K-014/33;  
 C12N-001/21;

## ABSTRACT EP 892054 A1

The present invention relates to detoxified immunogenic derivatives of Clostridium perfringens (beta)-toxin or an immunogenic fragment thereof that have as a characteristic that they carry a mutation in the (beta)-toxin amino acid sequence, not found in the wild-type (beta)-toxin amino acid sequence. The invention also relates to genes encoding such (beta)-toxins, as well as to expression systems expressing such (beta)-toxins. Moreover, the invention relates to bacterial expression systems expressing a native (beta)-toxin. Finally, the invention relates to vaccines based upon detoxified immunogenic derivatives of Clostridium perfringens (beta)-toxin, and methods for the preparation of such vaccines.

ABSTRACT WORD COUNT: 96

LANGUAGE (Publication,Procedural,Application): English; English; English  
 FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	9903	583
SPEC A	(English)	9903	7428
Total word count - document A			8011
Total word count - document B			0
Total word count - documents A + B			8011

5/3,AB/11 (Item 11 from file: 348)  
 DIALOG(R) File 348:EUROPEAN PATENTS  
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00826371

Adjuvant complexes

Komplexe mit Adjuvans-Aktivitat

Complexes a activite adjuvante

## PATENT ASSIGNEE:

MALLINCKRODT VETERINARY LIMITED, (766454), Berkhamsted Hill, Berkhamsted  
 Hertfordshire HP4 2QE, (GB), (applicant designated states:  
 AT;BE;CH;DE;DK;ES;FR;GB;GR;IT;LI;LU;NL;SE)

## INVENTOR:

MacKenzie, Neill Moray, Mallinckrodt Vet.Ltd. Breakspear Rd. South,  
 Harefield Uxbridge Middx UB9 6LS, (GB)  
 O'Sullivan, Angela Marie, Coopers Animal Health Ltd., Berkhamsted Hill,  
 Berkhamsted, Hertfordshire, (GB)

## LEGAL REPRESENTATIVE:

Bassett, Richard Simon (52833), ERIC POTTER & CLARKSON St. Mary's Court  
 St. Mary's Gate, Nottingham NG1 1LE, (GB)

10/039383

PATENT (CC, No, Kind, Date): EP 766967 A1 970409 (Basic)  
APPLICATION (CC, No, Date): EP 96202059 900831;  
PRIORITY (CC, No, Date): GB 8919819 890901  
DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FR; GB; GR; IT; LI; LU; NL; SE  
RELATED PARENT NUMBER(S) - PN (AN):  
EP 415794 (EP 903095701)  
INTERNATIONAL PATENT CLASS: A61K-039/39;

ABSTRACT EP 766967 A1

"Empty" iscom matrices, ie. formed without an antigen, and also conventional iscoms (formed with an antigen) can be formed without removing the solubilising agent used for the antigen.

In each case, the iscom can be 3-dimensional or, if formed without phospholipid, 2-dimensional.

The glycoside is preferably Quil A and the sterol is preferably cholesterol.

ABSTRACT WORD COUNT: 55

LANGUAGE (Publication,Procedural,Application): English; English; English  
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPAB97	140
SPEC A	(English)	EPAB97	4336
Total word count - document A			4476
Total word count - document B			0
Total word count - documents A + B			4476

5/3,AB/12 (Item 12 from file: 348)  
DIALOG(R)File 348:EUROPEAN PATENTS  
(c) 2004 European Patent Office. All rts. reserv.

00721011

INOCULATION OF ANIMALS WITH DRIED, PELLETED BIOLOGICAL MATERIALS  
IMPFGUNG VON TIEREN MIT GETROCKNETEN PELLETIERTEN BIOLOGISCHEN MATERIALIEN  
INOCULATION D'ANIMAUX A L'AIDE DE SUBSTANCES BIOLOGIQUES SECHES EN DRAGEES  
PATENT ASSIGNEE:

Solidose, L.L.C., (3927660), Suite 300, 6520 N. Western, Oklahoma City,  
OK 73116, (US), (Proprietor designated states: all)

INVENTOR:

HANSEN, Richard D., 2821 Northwest 2nd Court, Ankeny, IA 50021, (US)  
DRAKE, James F., 901 - 20th Avenue Southeast, Minneapolis, MN 55414, (US)

LEGAL REPRESENTATIVE:

Gerbino, Angelo et al (70581), Jacobacci & Partners S.p.A. Corso Regio  
Parco, 27, 10152 Torino, (IT)

PATENT (CC, No, Kind, Date): EP 744937 A1 961204 (Basic)  
EP 744937 B1 021002  
WO 95022314 950824

APPLICATION (CC, No, Date): EP 95910967 950208; WO 95US1706 950208  
PRIORITY (CC, No, Date): US 198836 940218; US 356477 941215  
DESIGNATED STATES: BE; DE; DK; ES; FR; GB; IE; IT; NL  
INTERNATIONAL PATENT CLASS: A61K-009/00

NOTE:

No A-document published by EPO

LANGUAGE (Publication,Procedural,Application): English; English; English  
FULLTEXT AVAILABILITY:

Searcher : Shears 571-272-2528

10/039383

Available Text	Language	Update	Word Count
CLAIMS B	(English)	200240	306
CLAIMS B	(German)	200240	273
CLAIMS B	(French)	200240	315
SPEC B	(English)	200240	3551
Total word count - document A			0
Total word count - document B			4445
Total word count - documents A + B			4445

5/3,AB/13 (Item 13 from file: 348)  
DIALOG(R)File 348:EUROPEAN PATENTS  
(c) 2004 European Patent Office. All rts. reserv.

00508396

INACTIVATED **MYCOPLASMA HYOPNEUMONIAE** BACTERIN AND METHOD OF USE  
THEREOF

INAKTIVIERTES **MYCOPLASMA HYOPNEUMONIAE** BACTERIN UND VERFAHREN ZU DESSEN  
ANWENDUNG

BACTERINE DE **MYCOPLASMA HYOPNEUMONIAE** INACTIVE ET METHODE  
D'UTILISATION DE CETTE BACTERINE

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